List of Contents

NUMBER 1

K. Fujii, K. Nakagawa, T. Anma and **S. Duan**	1	The stress concentration ratio of the interface crack between dissimilar anisotropic composite materials
R. Moskovic	21	Statistical analysis of censored fracture toughness data in the ductile to brittle transition temperature region
W.-T. Tsai and **L. R. Dharani**	43	Non-self-similar fiber fracture in unidirectional composites
P. A. Blatt, T. D. Scheumann and **A. F. Grandt, Jr.**	51	Evaluation of smooth and notched specimen fatigue behavior of Al–2.6Li–0.09Zr
Y. Xu and **L. M. Keer**	63	Crack curving in anisotropic elastic solids
M. R. Shanbhag, K. Eswaran and **S. K. Maiti**	75	Measurement of fracture toughness of bimaterial interfaces and a stress-based approach to their fracture
M. C. Pfeil, V. H. Kenner and **C. H. Popelar**	91	A fracture mechanics evaluation for the life expectancy of polyethylene butt fusion joints
G. Agnihotri	109	Stress analysis of a crack using the finite element method
E. Madenci and **L. Ileri**	127	Modified Mapping–Collocation method revisited
G. D. Stefanou	137	Punching shear resistance of prestressed concrete slabs
M. Yang and **K.-S. Kim**	155	The behavior of subinterface cracks with crack-face contact
	I	Software Survey Section

NUMBER 2

R. A. Crook and **A. Letton**	167	The viscoelastic behavior of notched glassy polymers
Y. Y. Wang, F. P. Chiang, R. S. Barsoum and **S. T. Chou**	175	Study of deformation field of interface crack in adhesive joint
D. Munz, T. Fett and **Y. Y. Yang**	185	The regular stress term in bonded dissimilar materials after a change in temperature
E. M. Patton and **M. H. Santare**	195	Crack path prediction near an elliptical inclusion

T. C. Kennedy and **J. B. Kim**	207	Dynamic analysis of cracks in micropolar elastic materials
Hao Tian-hu and **Zhu Weishen**	217	Collinear periodical cracks in anisotropic viscoelastic plane with surface separation and friction sliding
G. Nicoletto	231	Approximate stress intensity factors for cracked gear teeth
Fan Tian-You	243	Plastic zone and opening displacement of a propagating crack in a strip
S. A. Meguid and **S. X. Gong**	247	Stress concentration around interacting circular holes: a comparison between theory and experiments
Li Zhonghua, Zhao Yong and **S. Schmauder**	257	A cohesion model of microcrack toughening
Shi Mingzhe	267	Measuring the damage factor of materials with the thin-walled cylinder torsion test and the low-cycle fatigue test
A. Seweryn and **J. Zwoliński**	275	Solution for the stress and displacement fields in the vicinity of a V-notch of negative wedge angle in plane problems of elasticity
Ping Zhang and **Hao Lee**	283	Creep damage and fracture at high temperature
Liang Ban and **X. S. Shang**	289	The problem of a concentric penny-shaped crack of mode III in a nonhomogeneous finite cylinder
S. A. Hamoush and **M. R. Salami**	297	A stiffness derivative technique to determine mixed mode stress intensity factors of rectilinear anisotropic solids
G. S. Wang and **A. F. Blom**	307	Weight functions and stress intensity factors for Mode I cracks in arbitrary 2D geometries under general crack surface loading
		Technical Notes
O. E. K. Daoud	327	Energy release rates of straight-front edge-crack in a pipe under uniform tension or bending
J. M. Mínguez	335	Strength theories in fracture mechanics
	I	Software Survey Section

NUMBER 3

J. Llorca and **M. Elices**	341	Influence of specimen geometry and size on fracture of fiber-reinforced ceramic–matrix composites
Chen Yi-Heng and **H.-G. Hahn**	359	The stress singularity coefficient at a finite rigid flat inclusion in an orthotropic plane elastic body

I. L. Lim, I. W. Johnston and **S. K. Choi**	363	Stress intensity factors for semi-circular specimens under three-point bending
B. Wu and **T. P. Rich**	383	Stress intensity factors for cracks emanating from pressurized semi-circular cylindrical cavities
T. Hoshide	403	Grain fracture model and its application to strength evaluation in engineering ceramics
Yong Li Xu	409	Stress intensity factors of a radial crack in a rotating compound disk
K. Hussain, E. R. de los Rios and **A. Navarro**	425	A two-stage micromechanics model for short fatigue cracks
A. Hadrboletz, D. L. Chen, B. Weiss and **R. Stickler**	437	Experimental K-calibration of elliptical surface cracks under bending
G. Shen, G. Glinka and **A. Plumtree**	449	Fatigue life prediction of a B/Al composite
Kang Yong Lee and **Yong Hoon Jang**	459	Thermal stress intensity factors for an interfacial crack on a cusp-type inclusion
		Technical Notes
M. M. Rocha, G. I. Schuëller and **H. Okamura**	473	The fitting of one- and two-dimensional fatigue crack growth laws
E. Wagner, H. Gaisbauer and **H. P. Rossmanith**	481	Effect of inclined planar fractures on borehole performance
	I	Software Survey Section

NUMBER 4

F. Erdogan and **P. F. Joseph**	491	Fracture mechanics of quartz-to-metal seals
J. Donoso, F. Labbé and **C. Mora**	515	Evaluation of plastic eta factors in weld metal fracture specimens: a comparison between limit load and common format solutions
Zheng Qingxiong and **Zheng Xiulin**	521	An expression for fatigue life and probability distribution of fatigue strength under repeated torsion
P. S. Theocaris	529	The variation of the dynamic elastic modulus by a propagating edge crack
Tong-Yi Zhang and **Sanboh Lee**	539	Stress intensity factors of interfacial cracks
X. Y. Zhu, Z. X. Li and **Y. X. Jin**	545	Laminar fracture behaviour of (carbon/glass) hybrid fibre reinforced laminates—I. Laminar fracture process

X. Y. Zhu, Z. X. Li and **Y. X. Jin**	553	Laminar fracture behaviour of (carbon/glass) hybrid fibre reinforced laminates—II. Laminar fracture criterion
Y. Z. Chen	561	Numerical estimation of accuracy for calculated stress intensity factors in a crack problem
B. D. Chen, J. R. Griffiths and **Y. C. Lam**	567	The effects of simultaneous overload and spot heating on crack growth retardation in fatigue
V. V. Loboda	573	The quasi-invariant in the theory of interface cracks
L. A. Carlsson and **S. Prasad**	581	Interfacial fracture of sandwich beams
R. J. Dexter and **P. E. O'Donoghue**	591	Computational procedures and energy integral for dynamic fracture in viscoplastic materials
D. V. Ramsamooj	609	Fracture of highway and airport pavements
L. Molent and **R. Jones**	627	Crack growth and repair of multi-site damage of fuselage lap joints
		Technical Note
I. Avnon and **D. Z. Yankelevsky**	639	Shielding effect of microcrack interface in HCP
	I	Software Survey Section

NUMBER 5

Z. E. A. Ben-Aoun and **J. Pan**	649	Effects of elasticity and pressure-sensitive yielding on plane-stress crack-tip fields
Zhanjun Gao	663	Center notched metal matrix composites with interphase
H. Ghfiri, M. Nait-Abdelaziz and **G. Mesmacque**	681	Experimental determination of J on rubbery materials: influence of finite dimensions
D. Radaj and **S. Zhang**	691	On the relations between notch stress and crack stress intensity in plane shear and mixed mode loading
E. Smith	705	The use of eta factors to describe the J integral for the bend specimen
J. Białkiewicz	711	Progressive failure in a non-linear viscoelastic bundle of fibres
S. K. Maiti and **P. D. Savla**	721	Experimental and finite element study on mode I stable crack growth in symmetrically stiffened compact tension specimen
X. Lin and **J. Ballmann**	735	Re-consideration of Chen's problem by finite difference method

H. L. J. Pang	741	Linear elastic fracture mechanics benchmarks: 2D finite element test cases
K. Y. Lam, Cao Wen and **Zhuang Tao**	753	Interaction between microcracks and a main crack in a semi-infinite medium
M. Chiarelli and **A. Frediani**	763	A computation of the three-dimensional J-integral for elastic materials with a view to applications in fracture mechanics
Sun Jun	789	Stress triaxiality constraint and crack tip parameters
Tae Won Lee and **I. R. Grosse**	807	Energy release rate by a shape design sensitivity approach
R. Pippan	821	The crack driving force for fatigue crack propagation
	I	Software Survey Section

NUMBER 6

T. K. Hellen and **J. Joch**	831	Comparisons of fracture parameter evaluations for power law hardening creep
A. N. Gent, T. Y. P. Chang and **M. B. Leung**	843	Fracture and fatigue of bonded rubber blocks under compression
B. Skallerud, T. Iveland and **G. Härkegård**	857	Fatigue life assessment of aluminum alloys with casting defects
Jiun-Der Yu and **Kuang-Chong Wu**	875	Anti-plane shear crack in a sandwich composite
G-W. Ye, G. Yagawa and **S. Yoshimura**	887	Probabilistic fracture mechanics analysis based on three dimensional J-integral database
X. M. Chen and **H. G. Hahn**	895	Stress structure and deformation behavior of Mode I three-dimensional crack in elastic–plastic state
D. Radaj and **S. Zhang**	913	Analogies between crack tip and rigid line tip stresses and displacements
H. A. E. A. Atwa, N. M. Mawsouf and **M. Y. A. Younan**	921	Study of the effect of defects on the fatigue behaviour and the fracture toughness for low carbon steel (API 5L grade B) gas transmission pipelines
M. Farshad and **P. Flüeler**	937	Crack propagation in cylindrical shells
R. Chella, R. Aithal and **N. Chandra**	949	Evaluation of fracture parameters of composites subjected to thermal shock using the boundary element method and sensitivity analysis techniques

H. S. Saxena and **R. S. Dhaliwal** 963 Annular crack surrounding an elastic fibre in transversely isotropic elasticity

Tie-Jun Wang 971 Thermal and mechanical load induced damage behaviour of a low alloy steel: mechanisms and modelling

Ouk Sub Lee and **Seong Kyeong Hong** 981 Determination of stress intensity factors and J-integrals using the method of caustics

Technical Note

Bo Gong and **Zu Han Lai** 991 Fractal characteristics of J–R resistance curves of Ti–6Al–4V alloys

I Software Survey Section

i Index to Volume 44